(iii) 40 degrees.

(c) If the vessel's hull proportions fall within all three of the following limits, in lieu of complying with paragraph (b) of this section, the vessel owner may demonstrate in the presence of the OCMI that the vessel will not heel beyond the limits specified in paragraph (d) of this section:

(1) Beam to depth—3.40 to 4.75.

(2) Length to beam—3.20 to 4.50.

(3) Draft to depth—0.60 to 0.85.

(d) For the purpose of paragraph (c) of this section, the following limits of heel apply with the vessel at its deepest operating draft:

(1) Protected and partially protected waters and Great Lakes in summer—heel to main deck immersion or bilge emergence, whichever occurs first.

(2) Exposed waters and Great Lakes in winter—heel permitted to one-half of the freeboard or one-half of the draft, whichever occurs first.

[CGD 79–023, 48 FR 51045, Nov. 4, 1983, as amended by CGD 85–080, 61 FR 945, Jan. 10, 1996]

§ 173.025 Additional intact stability standards: Counterballasted vessels.

(a) Each vessel equipped to counterballast while lifting must be shown by design calculations to be able to withstand the sudden loss of the hook load, in each condition of loading and operation and at each combination of hook load and crane radius.

(b) When doing the calculations required by this section, the hook load and counterballast heeling arms and vessel righting arms, as plotted on graph 173.025, must define areas that satisfy the following equation:

Area II > Area I + K

Where—

(1) K=O for operation on protected waters and 7 foot-degrees (2.13 meter-degrees) for operation on partially protected and exposed waters.

(2) Areas I and II are shown on graph 173.025.

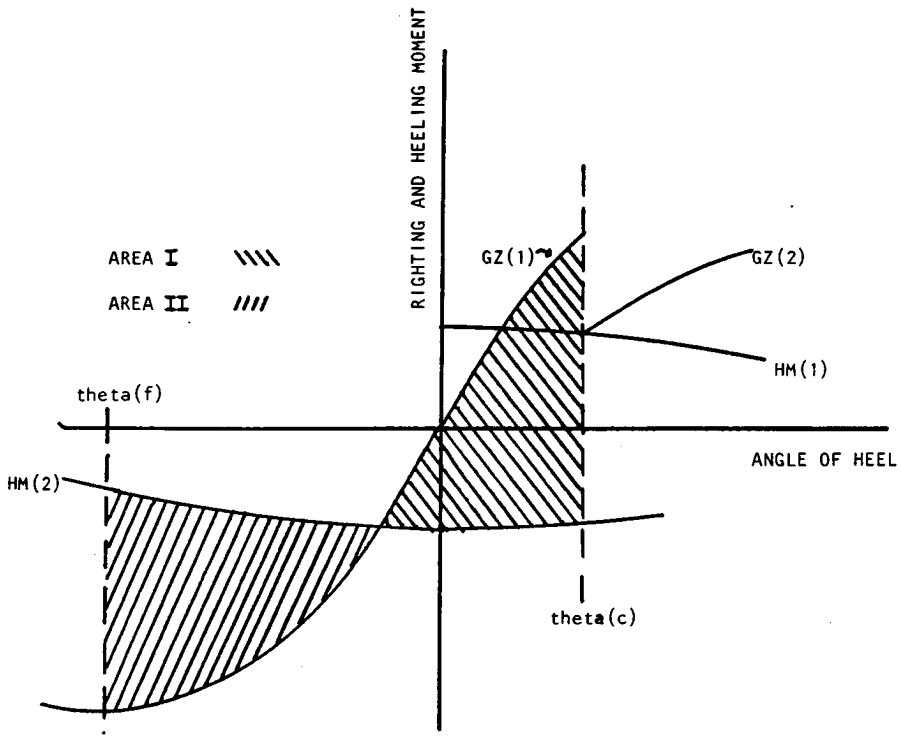
(c) Each heeling arm curve must be defined by—

HA=HAO cos (T)

Where—

HA=heeling arm.
HAO=heeling arm at 0 degrees of heel.
T=angle of heel.

GRAPH 173.025



Where—

GZ(1) is the righting arm curve at the displacement corresponding to the vessel without hooking load.

GZ(2) is the righting arm curve at the displacement corresponding to the vessel with hook load.

HA(1) is the heeling arm curve due to the combined heeling moments of the hook load and the counterballast at the displacement with hook load.

HA(2) is the heeling arm due to the counterballast at the displacement without hook load.

Theta(c) is the angle of static equilibrium due to the combined hook load and counterballast heeling moments.

Theta(f) is the downflooding angle on the counterballasted side of the vessel.

[CGD 79–023, 48 FR 51045, Nov. 4, 1983, as amended by CGD 85–080, 61 FR 945, Jan. 10, 1996]

Subpart C—School Ships

§ 173.050 Specific applicability.

Each nautical school ship, inspected under Subchapter R of this chapter, must comply with this subpart.

§ 173.051 Public nautical school ships.

Each public nautical school ship must comply with—

(a) Section 171.070(a) of this subchapter as a passenger vessel carrying 400 or less passengers;

(b) Section 171.070(e) of this subchapter;

(c) Section 171.072 of this subchapter; and

(d) Section 171.073 of this subchapter.

[CGD 79–023, 48 FR 51045, Nov. 4, 1983. Redesignated by CGD 83–005, 51 FR 924, Jan. 9, 1986]